

# Freescale 50A Dual-channel H-bridge Motor Driver

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## Description

This motor drive module performs much better than MC33886 or L298 drive module. It works very well in terms of motor start speed and power efficiency. It can withstand high current overload.

This drive has a brake function, which can quickly stop the motor. And the operation is very easy. Its performance is better than MC33886.

The drive module contains a full-bridge driver chip and MOSFET of low internal resistance. The full-bridge driver IC minimizes the switching loss of MOSFET and improves power efficiency. MOSFET driver chip has brake and power-feedback function.

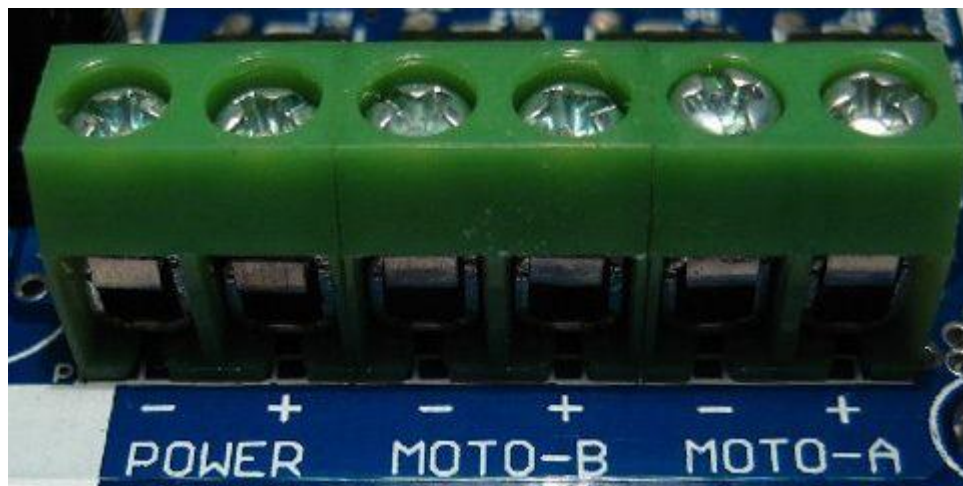
MOSFET can bear high current impulse, with internal resistance of 0.003 ohm. It can open the MOSFET quickly, improve the motor's speed curvature, and also brake the motor quickly. Those functions ensure the motor can start or stop quickly.

The drive module weighs 15 grams. It can work under the PWM duty cycle of 0% -98%. This is not a thing a common drive board could do.

## Parameters

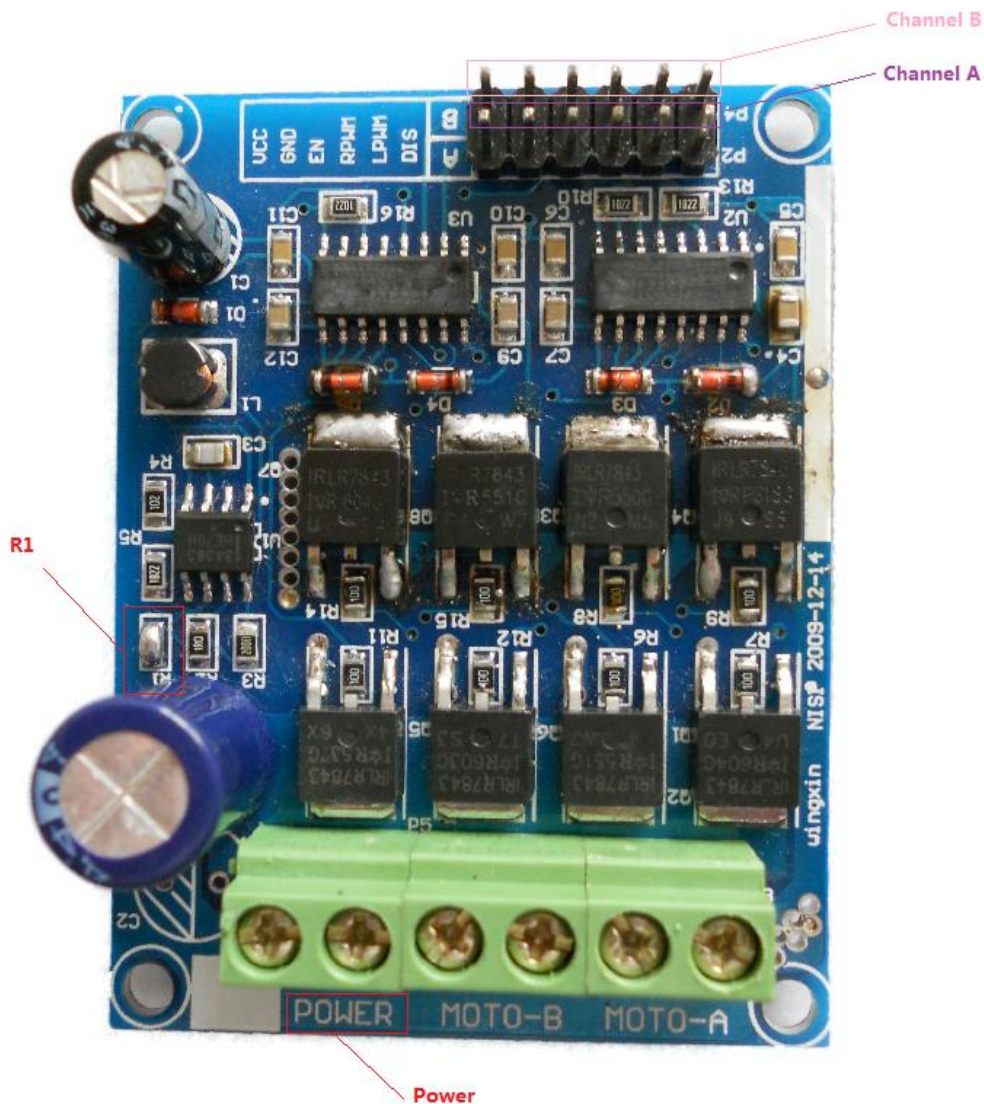
- Rated voltage: 3V-15V
- Rated current: 50A
- Peak Current: 100A
- Dimensions: length 6.05cm, Width 4.55cm
- Installation: screw connection. Mounting hole spacing: length 5.5cm, width 4cm

## Connection



POWER is connects with DC voltage supply.

Two motors can be connected to MOTO-A and MOTO-B terminals.



VCC: 3~12V

By default R1 is shorted. So VCC is shorted with Power, which means they are exactly the same. In this case, you only need to power either of the two, between 3~12V. You can break the shorted R1. So the control voltage VCC is independent, between 3~12V, typically 5V. And the Power can be over 15V.

## Instruction

- Rotate forward: EN = 1, RPWM = PWM, LPWM = 1, DIS = float (Here '1' means High, i.e. 5V.)
- Rotate reverse: EN = 1, RPWM = 1, LPWM = PWM, DIS = float
- Stop and brake: EN = 1, RPWM = 1, LPWM = 1, DIS = float
- Stop but not brake: EN = 0, RPWM = 1, LPWM = 1, DIS = float (Here '0' means High, i.e. 0V.)
- Prohibit the use: EN = X, RPWM = X, LPWM = X, DIS = 1 (Here 'X' means any status)

## Contact

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## Disclaimer and Revisions

The information in this document may change without notice.

### Revision History

<b>Rev.</b>	<b>Date</b>	<b>Author</b>	<b>Description</b>
A	Mar. 29 <sup>th</sup> , 2011	Wilson	Initial version